SECRET

25X1

Monthly Report

PAR 202
PAR 224
29 Oct 65

SUBJECT: PAR 202, Briefing Print Enlarger
PAR 224, 3X - 15X Fluid Gate Enlarger

TASK/PROBLEM

1. PAR 202: To design and build a prototype enlarger for exposing high-quality briefing prints in formats up to and including 20 x 24 inches in size. Magnification to be in the 10 - 60 diameter range. The enlarger will be able to produce both black-and-white and color prints. Change from one capability to the other should be made with a minimum of effort.

2. PAR 224: Develop and fabricate an enlarger having continuously variable magnification from 3X to 15X for 70mm negative gate size. Print sizes to range 40 x 40 inches on cut sheet stock.

DISCUSSION

3. The activity in this month has been to make photographic tests of the lens performance, on axis, and to obtain the data necessary for computer generation of the focus and magnification table. Focus calibration data for the five lowest magnification lenses had been obtained by the above date.

4. It has been possible to inject refractive index matching fluid by using care that the film is separated from the platen glasses at the time of injection. Further work on this system will be required.

5. A minor change of the control console circuit was required to eliminate a short flash of the main lamp as each filter passed by the lamp in changing filters in the setup and viewing condition. During other brief breaks in the photographic testing, the lamps to illuminate the in-frame co-ordinate scales were connected.

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6. The light collection system for the exposure control photometer does not deliver enough light to the photocell to permit reading easel illuminance with the printing filters. Consideration of means to improve its efficiency will be required.

PLANNED ACTIVITY

7. The focus calibration data will be completed and the focus/magnification table will be generated on the computer.

8. Tests of image quality and field curvature will be made for all of the lenses for blue light (black-and-white printing).

9. A set of black-and-white demonstration prints of high-quality aerial photographs (ON) will be made for the various lenses over the range of magnification of each.

10. A demonstration of the breadboard enlarger for a group of customer representatives is scheduled for 15 and 16 November.